L8 ANSWER 1 OF 4 USPATFULL
AN 2002:243856 USPATFULL
TI Process for production of alcohols
IN Chuang, Karl T., Edmonton, CANADA
Chen, Yung F., Taoyuan City, TAIWAN, PROVINCE OF CHINA
PI US 2002133050 A1 20020919
AI US 2001-918474 A1 20010801 (9)
PRAI US 2001-261203P 20010116 (60)
DT Utility
FS APPLICATION
LREP Philip C. Mendes da Costa, Bereskin & Parr, 40 King Street West, Box 401, Toronto, ON, M5H 3Y2
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 18 Drawing Page(s)
LN.CNT 1304
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention disclosed relates to the production of **alcohols**. A first aspect of the invention relates to a process for production of **alcohols**, and in particular to a process for the catalytic **hydration** of an **olefin** to the corresponding **alcohol** in substantially anhydrous form, under selected mild reaction conditions, and using a selected **catalyst**. A second aspect of the invention relates to a process for dehydration of an azeotropic mixture, including a first **alcohol** and **water**. A **hydration** reaction between the **water** in the azeotropic mixture and an added **olefin**, under selected mild conditions, and using a selected **catalyst**, produces a product including a second **alcohol** corresponding to the **olefin**, and the first **alcohol**, in substantially anhydrous form.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 2 OF 4 USPATFULL
AN 2001:120972 USPATFULL
TI Field assisted transformation of chemical and material compositions
IN Yadav, Tapesh K., Longmont, CO, United States
Meramadi, Bijan K., Longmont, CO, United States
PA Nanomaterials Research Corporation, United States (U.S. corporation)
PI US 6267864 B1 20010731
AI US 1999-286698 19990406 (9)
RLI Continuation-in-part of Ser. No. US 1998-165439, filed on 2 Oct 1998
PRAI US 1998-110710P 19981203 (60)
US 1998-100269P 19980914 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Wong, Edna
LREP Hogan & Hartson, L.L.P.
CLMN Number of Claims: 37
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1807
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and devices for transforming less desirable chemical species into more desirable or useful chemical forms are disclosed. The specifications can be used to treat pollutants into more benign compositions and to produce useful chemicals from raw materials and wastes. The methods and devices disclosed utilize continuous or

temporary pulse of electrical current induced by electromagnetic field and high surface area formulations. The invention can also be applied to improve the performance of existing **catalysts** and to prepare novel devices.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 3 OF 4 USPATFULL
AN 2001:88753 USPATFULL
TI Processes for electrically activated transformation of chemical and material compositions
IN Yadav, Tapesh, Longmont, CO, United States
Miremadi, Bijan K., Longmont, CO, United States
PI US 2001000889 A1 20010510
AI US 2000-730053 A1 20001205 (9)
RLI Continuation of Ser. No. US 1998-165439, filed on 2 Oct 1998, PENDING
PRAI US 1999-161098P 19991022 (60)
US 1998-100269P 19980914 (60)
DT Utility
FS APPLICATION
LREP Stuart T. Langley, Hogan & Hartson, L.L.P., One Tabor Center, 1200 Seventeenth Street, Suite 1500, Denver, CO, 80202
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 2189
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Illustrations are provided on applications and usage of electrically activated **catalysts**. Methods are disclosed for preparing **catalysts** from nanomaterials. Processes and devices are described that utilize **catalysts**. The invention can also be applied to improve the performance of existing **catalysts**, to enhance the performance of substances by inducing or applying charge in nanostructured forms of substances, and to prepare novel devices. Example processes for hydrogen production are discussed. Finally, the invention can be utilized to engineer the thermal, structural, electrical, magnetic, electrochemical, optical, photonic, and other properties of nanoscale substances.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 4 OF 4 USPATFULL
AN 2001:51419 USPATFULL
TI Method and device for transforming chemical compositions
IN Yadav, Tapesh, Boulder, CO, United States
Meramadi, Bijan, Longmont, CO, United States
PA Nanomaterials Research Corporation, Longmont, CO, United States (U.S. corporation)
PI US 6214195 B1 20010410
AI US 1998-165439 19981002 (9)
PRAI US 1998-100269P 19980914 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Wong, Edna
LREP Langley, Stuart T.
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 1708

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods and devices for transforming less desirable chemical species into more desirable or useful chemical forms are disclosed. The specifications can be used to treat pollutants into more benign compositions and to produce useful chemicals from raw materials and wastes. The methods and devices disclosed utilize electrical current induced by electromagnetic field and high surface area formulations. The invention can also be applied to improve the performance of existing **catalysts** and to prepare novel devices.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L40 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2003 ACS
AN 1997:303591 CAPLUS
DN 126:344747
TI More uses for catalytic distillation
AU Podrebarac, G. G.; Ng, F. T. T.; Rempel, G. L.
CS Chem. Res. & Licensing, Pasadena, TX, 77507, USA
SO CHEMTECH (1997), 27(5), 37-45
CODEN: CHTEDD; ISSN: 0009-2703
PB American Chemical Society
DT Journal; General Review
LA English
AB A review, with 56 refs., of **catalytic distn.**, in which a heterogeneously catalyzed reaction and distn. of the products and reagents occur simultaneously within a distn. column. Advantages and disadvantages, applications of **catalytic distn.** (etherification, **hydration** of **olefins**, dehydration of alc., alkylation of benzene, esterification and hydrolysis, **olefin** oligomerization , hydrogenation, addn. of alcs. to aldehydes, addn. of amines to ketones), and catalyst structure are discussed.

(FILE 'HOME' ENTERED AT 10:08:12 ON 15 JAN 2003)

FILE 'CAPLUS, USPATFULL' ENTERED AT 10:08:21 ON 15 JAN 2003

L1	826	S	OLEFIN (P) HYDRATION (P) ALCOHOL
L2	26	S	L1 AND CATALYTIC DISTILLATION
L3	22	S	L2 AND WATER
L4	21	S	L3 AND SOLID
L5	21	S	L4 AND CATALYST
L6	6	S	L5 AND SILICATE
L7	5	S	L6 AND ISOPROPANOL
L8	4	S	L7 AND ISOBUTENE
L9	2	S	L6 NOT L8
L10	15	S	L5 NOT L6
L11	15	DUP REM	L10 (0 DUPLICATES REMOVED)
L12	216934	S	OLEFIN
L13	14715	S	L12 AND HYDRAT?
L14	10598	S	L13 AND CATALY?
L15	9276	S	L14 AND WATER
L16	6949	S	L15 AND ALCOHOL
L17	4350	S	L16 AND DISTIL?
L18	2261	S	L17 AND ANHYDROUS
L19	1847	S	L18 AND RATIO
L20	1716	S	L19 AND PRESSURE
L21	1713	S	L20 AND TEMPERATURE
L22	149	S	L21 AND PROPENE
L23	70	S	L22 AND SILICATE
L24	134	S	L22 AND SILI?
L25	89	S	L24 AND ?PROPANOL
L26	86	S	L25 AND LIQUID
L27	745927	S	VAPOUR OR VAPOR
L28	3421810	S	27 OR GAS
L29	85	S	L26 AND L28
L30	326518	S	HYDROPHOBIC OR HETEROGENEOUS
L31	54945	S	L30 AND RESIN
L32	35	S	L29 AND L30
L33	17	S	L32 AND RESIN
L34	17	S	L33 AND ?BUTENE
L35	8	S	L34 AND ?BUTANOL
L36	9	S	L34 NOT L35
L37	18	S	L32 NOT L34
L38	18	DUP REM	L37 (0 DUPLICATES REMOVED)
L39	9	S	L22 AND CATALYTIC DISTILLATION
L40	12	S	OLEFIN (P) HYDRAT? (P) CATALYTIC DISTILLATION

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